

IN THE SPECIFICATION

Please replace the paragraph beginning on page 4, line 5, with the following amended paragraph:

A technique currently used by some manufacturers for producing a spacer layer is DVD-bonding. Firstly, spincoating provides an auxiliary substrate or "stamper", e.g. a PC substrate with guide grooves, with a thin layer non-adhesive to the stamper, which is subsequently cured or solidified with ultraviolet (UV) radiation. Then, this auxiliary substrate or "stamper" is glued to a DVD substrate with known DVD bonding techniques, in which technique the liquid glue is spincoated while present between the two substrates and subsequently cured by exposure to UV radiation. The circumferential variation of the total thickness of the cured non-adhesive layer and glue layer cannot be controlled well and the necessary tolerance, e.g. $\pm 1 \mu\text{m}$, is not met. Furthermore, the spin coating application of the non-adhesive layer introduces a so-called edge bead effect at the edge of the disk. This is a ~~peripheral-peripheral~~ zone of e.g. a few mm with relatively largely increased layer thickness because of surface tension effects at the edge of the disk. An increase of the layer thickness of larger than $5 \mu\text{m}$ may occur in this zone. Subsequently the stamper is separated from the non-adhesive layer that remains glued to the second substrate. Further process steps follow to finalize the DVD medium, e.g. the application of further recording stacks and a cover layer.

Please replace the paragraph beginning on page 6, line 14, with the following amended paragraph:

It is advantageous when a few mm wide outer ~~peripheral-peripheral~~ zone of the substrate is shielded by a mask in order to prevent exposure of the liquid layer in this zone to UV radiation. After the exposure of the liquid in the exposed portion, the substrate is rotated at a rotation frequency sufficiently high to substantially remove the non exposed liquid in the outer ~~peripheral-peripheral~~ zone from the substrate. This has the advantage that a possible edge bead (see 12b in Fig.1) in the

outer ~~peripheral-peripheral~~ zone is removed and that no residues of liquid are left at the outer periphery of either the substrate or a stamper which is used with e.g. the DVD bonding technique as described earlier in which case UV curable glue, which is expelled from between the DVD substrate and the stamper and has accumulated at the periphery and leave a residue at the stamper or a burr at the DVD substrate after separating these two, is removed by this process step. In this way a stamper may be used again more easily. Compare the so-called DVD-18 technique, which is used to produce double sided dual layer DVD read only disks where information is transferred by embossing via a stamper substrate, but which technique requires the removal of excess glue in order to enable a good separation of the stamper substrate and the DVD substrate.

Please replace the paragraph beginning on page 8, line 5, with the following amended paragraph:

Preferably the apparatus has a mask for shielding a few mm wide outer ~~peripheral~~ peripheral zone of the substrate in order to prevent exposure of the liquid layer in this zone to UV radiation.

Please replace the paragraph beginning on page 9, line 21, with the following amended paragraph:

A radial thickness profile is achieved with a thickness of 25 μm . The variation is not more than $\pm 0.5 \mu\text{m}$. In order to minimize changes in the thickness profile the rotation frequency is ramped down from 50 Hz to 13 Hz in about 2 seconds and left 10 seconds at this rotation speed in order to allow time for removing the IR heating device and placing a UV radiation source.

Subsequent pre-solidifying of the liquid 12 is performed by means of exposure to UV radiation, e.g. a high power UV source 15, e.g. Philips HP-A 400W, with a special reflector at a height of 10 cm above the liquid 12 surface. UV radiation source 15 gives a substantially uniform radiation output. The UV exposure for pre-solidifying at the position of the liquid layer 12 of the substrate takes 2 seconds with an intensity of 50 mW/cm^2 . The UV exposure takes place in an atmosphere containing oxygen, i.e. air, and at an exposure intensity leaving a few μm top portion of the liquid layer 12 unsolidified by means of oxygen inhibition. This top layer may be required for subsequent process steps, e.g. the embossing of information in the top surface of the liquid layer 12. A few mm wide outer ~~peripheral-peripheral~~ zone of the substrate 11 is shielded by a mask 16 in order to prevent exposure of the liquid layer in this zone to UV radiation. After the UV exposure of the liquid 12 in the exposed portion, the substrate 11 is rotated at a rotation frequency sufficiently high, i.e. 65 Hz, to substantially remove the non exposed liquid 12b in the shape of an edge bead in the outer ~~peripheral-peripheral~~ zone from the substrate 11. Note that in the drawing the layer thickness of the liquid layer 12 is drawn showing the situation before starting the heating method according to the invention. It must be noted that the mentioned spin coating rotation speeds and times may be adapted and that at higher rotation speeds the cycle time may be reduced substantially. In a more automated process using a higher intensity of both the IR lamp and the UV lamp even a further reduction of cycle time may be achieved. The IR and UV radiation sources may be positioned automatically, which further reduces the cycle time. The method may be fine tuned to liquids with different properties, e.g. viscosity. E.g. for DVD bonding a glue is used, made by DIC type nr SD694, having a viscosity of 350 mPas. The spin rotation speeds for this liquid must be adapted to e.g. 30 Hz and 10 Hz instead of 50 Hz and 13 Hz.